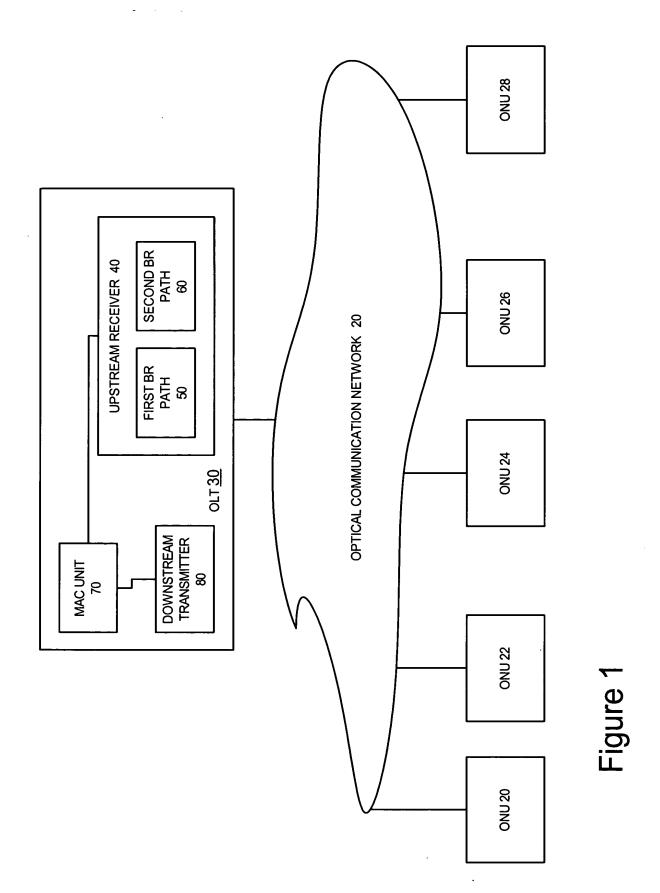
Blakely, Sokoloff, Taylor & Zafman LLP (408) 947-8200 Title: An Apparatus and A Method for Allocating Upstream Bandwidth of a Shared Upstream Channel of an Optical Network 1st Named Inventor: Guy M. Benhaim Express Mail No.: EV410137891US Docket No.: 7019P001 Sheet: 1 of 6



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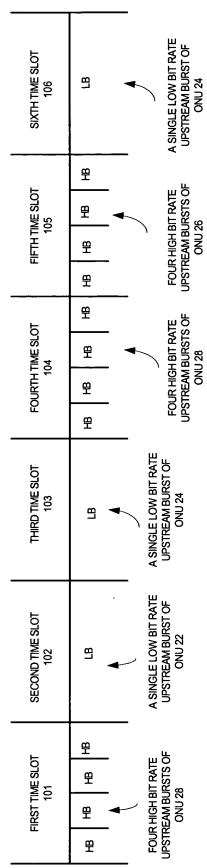


FIGURE 2

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downstream transmitting a grant to a network unit to upstream transmit information during a certain time-slot 202

requesting that network unit 28 to transmit information at another bit-rate 204

receiving the transmission and determining its bit-rate 206

Optional - additional iterations

<u>200</u>

FIGURE 3

FIRST TIMESLOT 101 FIRST SECOND THIRD FOURTH TIMESLOT* TIMESLOT* TIMESLOT* TIMESLOT* 111 112 113 114 **GRANT OF FIRST** TIMESLOT* **GRANT OF SECOND** TIMESLOT* **GRANT OF FIRST TIMESLOT GRANT OF THIRD** TIMESLOT* **GRANT OF SECOND GRANT OF FOURTH TIMESLOT** TIMESLOT* GRANT OF 109TH GRANT OF 51TH TIMESLOT* TIMESLOT GRANT OF 111TH GRANT OF 52ND TIMESLOT* TIMESLOT GRANT OF 112ND GRANT OF 53ND TIMESLOT* TIMESLOT SECOND GRANT TABLE 430

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FIGURE 4

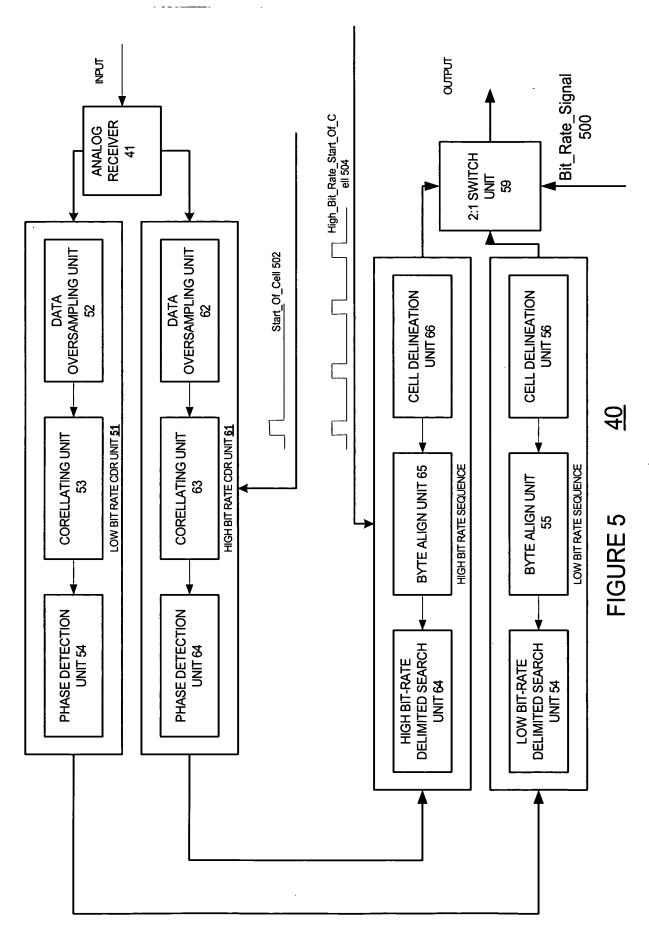
FIRST GRANT TABLE 400

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receiving requests for transmitting information towards the apparatus.
610

issuing data grants in response to at least the requests; wherein at least one data grant authorizes a first network unit to transmit data at a first bit-rate during at least one time-slot and at least one other data grant authorizes a second network unit to transmit data at a second bit-rate during at least one other time-slot, whereas the second bit-rate differs from the first bit-rate.

620

requesting one or more multiple bit-rate network units to transmit at a certain bit-rate out of the multiple bit-rates 630

<u>600</u>

FIGURE 6